

Maryland's Evolving TMDL Implementation Framework

The following framework document is intended to give a brief sketch of Maryland's evolving TMDL implementation framework. It is not intended to be a comprehensive guidance document, but rather a starting point for on-going discussion. The original draft was written in June 2003.

Overview:

Maryland views TMDL Implementation as having two-prongs:

- 1) TMDL Institutionalization
- 2) Implementation Planning and Execution
 - a. Plans to address existing excessive pollutants
 - b. Framework for off-setting new sources of pollutants
 - c. Framework for protecting healthy waters

TMDL Institutionalization:

The Maryland Department of Environment (MDE) will inform potential responsible parties of TMDLs that are approved by EPA. MDE makes information about approved TMDLs readily available via the internet for this purpose¹. Currently, notifications of approved TMDLs are sent to key State agencies, local government representatives, and stakeholders who have expressed interest in the TMDL. These parties will be encouraged to ensure that their future actions are consistent with the TMDL. For example, State and local government agencies that conduct permit reviews should add "TMDL consistency review" to their review check-lists.

The process by which TMDLs are institutionalized will be documented in the State's Continuing Planning Process (CPP), required by the federal Clean Water Act. MDE institutionalizes TMDLs by adjusting permit limits to reflect wasteload allocations.

Implementation Planning and Execution:

The traditional notion of "implementation" involves developing implementation plans, executing those plans, tracking and evaluating progress, and adjusting the plans based on information from the evaluations. This planning must address the reduction of excessive pollutants, off-setting new sources, and protecting healthy waters².

Role of TMDL Analysis Reports: Maryland's TMDL analysis reports include a brief section entitled, "Assurance of Implementation," which identifies programs that will be vital to TMDL implementation. In addition, technical memoranda are typically issued with TMDLs, which provide information in support of implementation planning. Finally, technical support material for each TMDL project is archived on a compact disk.

Implementation Plan Documentation: Detailed implementation planning is often occurring among stakeholders who are most able to establish the plans at a local level. Examples include

1. See approved TMDLs www.mde.state.md.us/programs/waterprograms/tmdl/approvedfinaltmdl
2. See Antidegradation under www.mde.state.md.us/programs/waterprograms/tmdl/wqstandards

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reservoir management plans, the Coastal Bays Comprehensive Conservation Management Plan, local government watershed management plans, Watershed Restoration Action Strategies, watershed plans developed under the NPDES stormwater permitting program, and other remediation plans and watershed plans. The State will maintain an annotated index of the decentralized implementation plans for each TMDL. If federal regulations or other circumstances evolve, the State reserves the option of playing a more direct role in drafting and maintaining plans for each TMDL.

In addition, the MDE will document the State permitting actions that implement the waste load allocations (WLAs) of the TMDLs. The procedures for doing this will be documented in the State's Continuing Planning Process (CPP). (See "Tracking and Evaluation of Implementation" below).

State Guidance on Elements of Implementation Plans: Although refinement of the federal TMDL regulation is uncertain, Maryland's TMDL implementation framework will consider the primary watershed planning elements in the draft federal rule, Section 130.41(b) (Attachment A). These planning elements will be provided as guidance to local jurisdictions, and others, who are responsible for watershed planning in regions where TMDLs have been adopted.

The programs needed to implement TMDLs and achieve water quality standards currently exist. In the Chesapeake Bay region, states have developed nutrient management strategies that involve stakeholders and include tracking systems. Rural areas have well-established natural resource management frameworks and funding sources for addressing agricultural activities. Most urban areas are managed under NPDES stormwater regulations. In addition, Maryland has forestry management programs, wetlands management programs, coastal zone management programs, and land use planning systems, all of which have a role to play. TMDL implementation plans will build upon, and integrate these and other existing programs.

Technical Assistance: The State will provide technical assistance to stakeholders involved in TMDL implementation. One example of this is the watershed characterization surveys conducted by the Maryland Department of Natural Resources (DNR) on behalf of local governments during the development of Watershed Restoration Action Strategies. Another example is the technical assistance provided by staff of MDE's Water Management Administration during the process of establishing NPDES surface water permits. MDE has also adopted an initiative to assist local governments incorporate the implementation of nutrient TMDLs into local planning efforts. The Maryland Department of Planning helps local governments assess alternative land use planning options. The Maryland Department of Agriculture provides planning, technical and financial assistance.

Coordination: Maryland has a number of well-conceived forums being used to coordinate the TMDL implementation goals. Broad examples include:

- Maryland's Interagency TMDL Workgroup
- Maryland's Chesapeake Bay Cabinet and Workgroup
- Maryland's Tributary Strategy Implementation Steering Committee
- Maryland's Watershed Restoration Action Strategy (WRAS) framework
- The Chesapeake Bay Program Watershed Assistance Workgroup

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- Various Geographic-specific forums (e.g., Coastal Bays, Potomac, Anacostia)
- Various Pollutant-specific forums (e.g., Acid Mine Drainage, Toxic Substances, Nutrients)
- Various Institutional forums (e.g., EPA, Army Corps, Councils of Government)

Tracking and Evaluation: MDE will track implementation activities that are under its direction, in particular the permitting activities that implement waste load allocations. In addition, MDE will encourage others to track their implementation activities and new sources of pollutants that must be off-set by additional reductions. Examples include local government tracking of land use changes and pollutant reduction activities (some of which is done under the municipal NPDES stormwater permits), the well-evolved tracking of activities that feed into the Chesapeake Bay Program framework, the tracking of stream restoration projects and activities to control pollutants other than nutrients. Such tracking mechanisms will need to be specified in more detail in TMDL implementation planning documents.

MDE will also conduct evaluation monitoring to support evaluations of TMDL implementation activities. The monitoring by other State agencies, local governments, academic institutions, and others will also be considered when evaluating TMDL implementation. This information will also be used to periodically evaluate the TMDL analyses themselves as new information becomes available, and we gain a better understanding of the science upon which the TMDLs are based.

Synopsis of Attachment A

This attachment is adapted from EPA's DRAFT TMDL/Watershed Rule, Section 40CFR130.41

130.41(b) Title:

“What elements are appropriate for a watershed plan designed to attain and maintain water quality standards?”

130.41(b) Elements of a plan:

1. Geographic extent of the waterbody and associated watershed(s)
2. Applicable water quality standards
3. Identification of:
 - i. Causes and sources of pollutants that need to be controlled
 - ii. Threats
4. Identification of approved TMDLs, and adjustments to allocations (Changes to allocations are the prerogative of the State, and require a formal public process).
5. Description of:
 - i. Point source controls and responsible parties
 - ii. Nonpoint source measures designed to achieve load allocations and responsible parties.
 - iii. Other water quality management measures needed to attain and maintain water quality standards (e.g., air pollution controls).
6. An estimation of pollutant reductions expected from 5(i, ii, iii)
7. A schedule, with milestones, for addressing 5(i, ii, iii), and an estimate of the date when standards are expected to be attained.
8. Interim, measurable milestones for assessing if NPS controls are being implemented.
9. Cost estimates and identification of funding sources.
10. A plan for technical assistance, education and outreach.
11. A monitoring plan to assess progress on implementation (tracking) and water quality response.
12. An adaptive implementation process to identify necessary refinements based on monitoring feedback. The State will provide criteria to determine if the TMDL needs to be revised.